

AMENDMENTS TO THE CLAIMS

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A system comprising:

a bridge coupled between a first data bus and a second data bus;

a target device coupled to the first data bus at a data bus address;

a decoder to provide bus segment information to the bridge independently of response to a bus transaction on the second data bus initiated by a source device;

~~at least one connection coupled to the source device, wherein the source device to~~
transmit an encoded signal via a connection to the decoder, wherein the encoded signal to
identify a bus segment being selected to receive the bus transaction and at least one
~~connection is associated with a bus segment coupled to the target device, wherein the decoder~~
generates the bus segment information based on the encoded signal associated bus segment in
~~response to an assertion of the at least one connection,~~

wherein the bridge comprises logic to forward the bus transaction on the first data bus to the target device based upon the bus segment information.

2. (Original) The system of claim 1, wherein the bridge further comprises:

logic to forward bus transactions on the first data bus to the second data bus, each forwarded bus transaction being addressed to a range of data bus addresses on the first data

bus; and

logic to combine bus segment information from the decoder with a portion of a data bus address in the range of data bus addresses to provide a data bus address for a bus transaction forwarded to the first data bus.

3. (Original) The system of claim 2, wherein the bus segment information comprises a first portion of the data bus address of the target device.

4. (Original) The system of claim 2, wherein each data bus address comprises a plurality of most significant bits and a plurality of least significant bits, and wherein the bridge further comprises logic to combine the least significant bits of the address with bus segment information to provide the data bus address of the target device on the first data bus.

5. (Original) The system of claim 2, wherein each data bus address comprises a plurality of most significant bits, and wherein the bridge further comprises logic to detect a data bus transaction to be forwarded to the second data bus based upon a single value expressed in the most significant bits.

6. (Original) The system of claim 1, wherein the system further comprises one or more source devices to initiate bus transaction on the second data bus having data bus addresses within the range of data bus address, and wherein each source device is coupled to the decoder to provide bus segment information in response to initiating a bus transaction on the second data

bus having a data bus address within the range of data bus addresses.

7. (Currently Amended) A method comprising:

initiating a bus transaction to a target device coupled to a first data bus at a data bus address from a source device coupled to a second data bus, the first and second data busses being coupled to a bridge;

generating bus segment information of a bus segment coupled to the target device, wherein the bus segment information to be generated from an encoded signal transmitted via a connection from the source device to a decoder, wherein the encoded signal to identify a bus segment being selected to receive the bus transaction, and wherein the decoder generates the bus segment information based on the encoded signal ~~wherein the bus segment is associated with at least one connection, wherein the at least one connection is coupled to the source device, and wherein the bus segment information is generated in response to an assertion of the at least one connection; and~~

providing the bus segment information to the bridge in response to the bus transaction independently of the second data bus; ~~and~~

~~forwarding the bus transaction to the target device on the first data bus based upon the bus segment information.~~

8. (Original) The method of claim 7, the method further comprising:

forwarding bus transactions on the second data bus to the first data bus, each forwarded bus transaction being addressed to a range of data bus addresses on the second data

bus; and

combining the bus segment information with a portion of a data bus address in the range of data bus addresses to provide a data bus address for a bus transaction forwarded to the first data bus.

9. (Original) The method of claim 8, wherein the bus segment information comprises a first portion of the data bus address of the target device.

10. (Original) The method of claim 8, wherein each address in the range of address comprises a plurality of most significant bits and a plurality of least significant bits, and wherein the method further comprises combining the least significant bits of the address with bus segment information to provide the data bus address of the target device on the first data bus.

11. (Original) The method of claim 8, wherein each data bus address comprises a plurality of most significant bits, and wherein the method further comprises detecting a data bus transaction to be forwarded to the second data bus based upon a single value expressed in the most significant bits.

12. (Original) The method of claim 7, wherein the method further comprises one or more source devices to initiate bus transaction on the second data bus having data bus addresses within the range of data bus address, and wherein each source device is coupled to the decoder to provide bus segment information in response to initiating a bus transaction on the

second data bus having a data bus address within the range of data bus addresses.

13. (Currently Amended) An apparatus comprising:

means for initiating a bus transaction to a target device coupled to a first data bus at a data bus address from a source device coupled to a second data bus, the first and second data busses being coupled to a bridge;

means for generating bus segment information of a bus segment coupled to the target device, wherein the bus segment information to be generated from an encoded signal transmitted via a connection from the source device to a decoder, wherein the encoded signal to identify a bus segment being selected to receive the bus transaction, and wherein the decoder generates the bus segment information based on the encoded signal ~~wherein the bus segment is associated with at least one connection, wherein the at least one connection is coupled to the source device, and wherein the bus segment information is generated in response to an assertion of the at least one connection;~~

means for providing the bus segment information to the bridge in response to the bus transaction independently of the second data bus; and

means for forwarding the bus transaction to the target device on the first data bus based upon the bus segment information.

14. (Original) The apparatus of claim 13, the apparatus further comprising:

means for forwarding bus transactions on the second data bus to the first data bus, each forwarded bus transaction being addressed to a range of data bus addresses on the second

data bus; and

means for combining the bus segment information with a portion of a data bus address in the range of data bus addresses to provide a data bus address for a bus transaction forwarded to the first data bus.

15. (Original) The apparatus of claim 14, wherein the bus segment information comprises a first portion of the data bus address of the target device.

16. (Original) The apparatus of claim 14, wherein each address in the range of address comprises a plurality of most significant bits and a plurality of least significant bits, and wherein the apparatus further means for comprises combining the least significant bits of the address with bus segment information to provide the data bus address of the target device on the first data bus.

17. (Original) The apparatus of claim 14, wherein each data bus address comprises a plurality of most significant bits, and wherein the apparatus further comprises means for detecting a data bus transaction to be forwarded to the second data bus based upon a single value expressed in the most significant bits.

18. (Original) The apparatus of claim 13, wherein the apparatus further comprises one or more source devices to initiate bus transaction on the second data bus having data bus addresses within the range of data bus address, and wherein each source device is coupled to

the decoder to provide bus segment information in response to initiating a bus transaction on the second data bus having a data bus address within the range of data bus addresses.